

c) computing a surround red response, a surround green response and a surround yellow response based on said images;

d) computing a red, a green and a blue on-center opponent and filtered opponent response, based on said center and surround responses;

e) computing a red, a green and a yellow off-center opponent and filtered opponent response based on said center and surround responses;

f) computing a red, a green and a blue double-opponent response (do-response) and a corresponding filtered double-opponent response based on said on-center and off-center filtered opponent responses;

g) computing a red, a green and a blue do-remote response [signal] based on a set of responses selected from the group consisting of said on-center filtered opponent responses and said filtered double-opponent responses; and

h) for each pixel: correcting each of said red, green, and blue double-opponent responses for color contrast using respectively said red, green and blue do-remote response [signals], thereby producing corrected red, green and blue double-opponent responses .

9. (Amended) The method of claim 7 [1], wherein said step of computing each said double-opponent surround response includes convolving a surround filtered response with a surround spatial weight function.

14. (Amended) The method of claim 2 [1], wherein said step of correcting each of said red, green, and blue double-opponent responses for color contrast includes the steps of: for each said double-opponent response

a) computing a respective adaptive function G_b ; and

b) computing a respective adaptation factor, based on said respective adaptive function.

29. (Amended) The method of claim 28, wherein said inversely transforming includes transforming said new center [double-opponent cell] responses into new opponent cell responses. {

31. (Cancelled)

32. (Cancelled)

33. (Amended) A method for adjusting an achromatic contrast of a scene, the scene including an intensity spectrum at each of a plurality of pixels, the method comprising the steps of:

a) providing an image that has an intensity value at each of the plurality of pixels;

b) obtaining an adapted opponent center response using a plurality of said pixel intensity values by:

i) calculating an opponent center response;

ii) providing a center adaptation factor that includes a remote center adaptation term, and

iii) combining said opponent center response and said center adaptation factor; and

c) at each pixel, correcting the achromatic contrast using said adapted opponent center response.

35. (Amended) The method of claim 33 [32], further comprising obtaining an adapted opponent surround response, wherein said step of correcting for achromatic

[intensity] contrast includes subtracting said adapted opponent surround response from said adapted opponent center response.

39. (Amended) The method of claim 33 [31], wherein said step of providing pixel intensity values includes: at each pixel: i) multiplying the intensity spectrum by a spectral response function, thereby providing a spectral product; and ii) integrating said spectral product.

40. (Amended). The method of claim 33, wherein said step of obtaining an adapted opponent center response includes convolving each said pixel intensity value with a center spatial weight function.